

Training Environmental Stewards: Integrated Water Quality & Quantity Education From Mountain to Ocean

From impaired water quality to declining salmon populations, from the loss of farm and forest resource lands to the growing demands for regional water resources, a diversity of water quality and quantity challenges face residents of the Pacific Northwest. Citizens need to understand the impacts of land use on water resources and know what steps they can take to reduce that impact. Trained WSU Extension volunteers associated with a variety of natural resource stewardship programs are working within

Northwest communities and ecosystems to address these challenges. The “Training Environmental Stewards” project will develop curriculum and training resources



Class of 2002 Extension Watershed Stewards

Photo S. Kantor

to provide a coordinated approach to training volunteers about preserving water quality and quantity across several land-uses, especially those that you would experience as you travel from the ridge of the Cascades to the Puget Sound or Pacific Ocean. This project will create a core curriculum that addresses the basic land-use impacts on water quality and quantity, as well as specific modules that address the unique impacts and best management practices associated with major land-uses.

Using the train-the-trainer model, these materials will be used to train volunteers who will go out and work with individuals and communities in King County and beyond to address water resource issues.

Program Goals:

- Develop a core water quality and quantity curriculum;
- Implement and evaluate this curriculum in volunteer training classes;
- Assist volunteers in developing and delivering outreach activities throughout the region;
- Involve youth with hands-on activities related to water quality issues;
- Showcase to the general public methods employed by agricultural producers to protect water quality and quantity.

Curriculum Development

The focus of this curriculum is on an integrated approach to understanding water quality and quantity issues across all land-uses. We recommend that all users of this curriculum teach *Module I: Watersheds, the Water Cycle, and You*. This module introduces and lays the groundwork for understanding the science behind and the dynamic nature of watersheds, hydrology and the water cycle. It incorporates the natural landscape forms and processes (e.g. streams, riparian areas, lakes, wetlands, etc.) in addition to introducing: a) how humans interact with the watershed (forestry, agriculture, household practices, etc), b) general types of degradation (e.g. physical, chemical, biological), and c) management and mitigation options for watershed impacts.

Water Quality Curriculum Modules

- Module I: Watersheds, the Water Cycle, and You
- Module II: Forestry
- Module III: Agriculture
- Module IV: Land Development (low impact development)
- Module V: General Household Practices (inside the home)
- Module VI: General Household Practices (outside the home)
- Module VII: Recreation
- Module VIII: Watershed [River] Law
- Module IX: Civic Participation

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The next six modules address specific land uses: *forestry, agriculture (both livestock and crop production), land development, indoor and outside household practices, and recreation*. In each module we address these four core questions:

- What is the problem?
- Why is it a problem?
- What are potential solutions, management, mitigation?
- What is the local relevance / what can the individual do?

In each module, the authors address in greater detail various types of degradation and mitigation/management options that were introduced in Module I. The curricula concludes with a few optional modules that can be used to round out an overall course or provide additional options. These include a more detailed look at regulations and water law and civic participation.

WSU will continue to develop and test the curriculum throughout 2004 and early 2005, with the draft curriculum binder set to be available by July 2005.

Water Quality Events and Training

2004 WSU Harvest Celebration Farm Tour

- 4,000 to 8,000 farm visitors
- WSU showcased 9 farms that protect water quality through manure and bedding management practices.
- Watershed stewards were on hand at the Lewis Irwin Farm to conduct presentations and answer questions about the farm's effort to raise cattle while preserving a salmon stream.

2004 Small Farm Expo

- 1,200 attended
- Eleven of the Expo presentations addressed water quality issues, including manure and mud management, weed control, agricultural regulations, native plant landscaping, water-wise gardening, and wildlife management.
- Of the 130 participants who completed WSU evaluation forms, 29 people learned a new practice to protect water quality; 21 of these people indicated they would implement this practice in the next month.

Volunteers or Landowners trained with tested curriculum components

Watershed Stewards: 17

Livestock Advisors: 7

Forest Landowners: 28

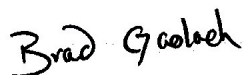
Master Gardeners: 85 in King County and 82 in Pierce County

Farm Best Management Practices: 6

Water quality curricula are being developed and tested for the following WSU Extension Stewardship Programs:

Extension Watershed Stewards
Forest Stewardship (landowners)
Forest Advisors (volunteers)
Extension Livestock Advisors
Master Gardeners
Living on the Land (landowners)

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